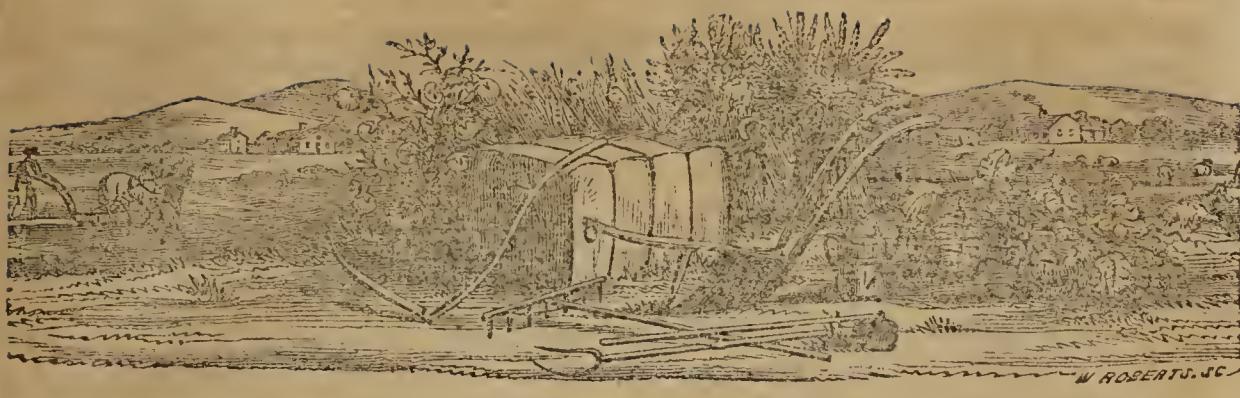


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W. ROBERTS, SC.

FARMER AND PLANTER.

DEVOTED TO AGRICULTURE, HORTICULTURE, DOMESTIC AND RURAL ECONOMY,

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[For the Farmer and Planter.]

Botany for the Farmer.

Messrs. Editors: Could Abbeville anticipate any benefit to the agriculturists of our country, by the descriptive botany of indigenous and introduced plants, the labor would be cheerfully entered upon. While reading the programme of studies of the numerous female schools that have sprung up of late, we see Botany stands prominent. If this is a fact, every plant in one season should be well scrutinized and understood, and at the end of the year every girl so studying should bring home an herbarium, neatly put up, of well-described plants, that grew in the vicinage of the school. There is scarcely a family but sends a daughter to these schools. Then why is it that there is such a sparseness of botanical knowledge? There must be something wrong in the plan of teaching, or a want of knowledge in the teachers themselves.

Botany is a science of observation; "all its paths are peace," and it is in harmony with the delicately-formed female. The labor of gathering plants for study would play a healthful part in the physical well-being of the girl so employed, fixing the re-

flection of the rose and lily in love-inspiring tints in her face. The herbarium would serve as a field of reference, to which the father could go for a knowledge of plants that pestered his ground, or that drew his attention any way. Thus would knowledge be disseminated and made useful, and the teachers' influence would be felt, and the money paid for these studies would not be looked upon as a useless expenditure.

We think Laurens is mistaken when he says "the field is large and almost unexplored." It would be difficult to find what would be called a new plant (that is an undescribed plant) in South Carolina. There has been, and is now many observers in the field. The fruits of their labor has been mostly submitted to the two great masters of American Botany, Drs. Gray and Tony, who have, with a praiseworthy zeal, done up the science of North American Botany, a lasting monument to themselves, and a rich legacy to ages to come.

We will intrude on your pages, Messrs. Editors, by responding to Laurens, as to the plants, designated in the postscript.

Firstly, CARROT-WEED. This plant is in the natural order *Umbelliferæ*, the forty-eighth of Jussieu, and tribe seventh. *Daucinæ*. Genus, *Daucus*, (from *daukos*, the Greek name for carrot,) and species *Carota*: Class, *Pentandria*: Order, *Digynia*. The *daucus carota* is a native of the dry plains of Europe, but has become naturalized in this country, having a wide range from New York to Georgia, and probably further north and south. "Stem hispid; leaves 2—3 pinnatifid; ultimate lobes lanceolate and cuspidate; leaflets of the involucre pinnatifid, nearly the length of the umbel; prickles about equal to the diameter of the oblong-ovia fruit. Root fusiform, yellowish—biennial. Stem, about 1 to 2 feet high; branching leaves; hispidly pubescent; umbels with very numerous rays, which are turned inwards after flowering. Flowers

white, sometimes cream-colored; a solitary central one of each umbellet; sometimes abortive and colored. Primary ribs of the carpels very slender; ciliate; secondary ones much stronger, cut into slender prickles."

The root is frequently used as an anti-septic poultice. The seeds are emollientive. When cultivated it is much improved, and as a culinary root, is much prized.

We think all biennial taproots are good ameliorators of the soil, where left on the land.

There is said to be another species, the *Daucus Pusillus*, with "leaves very much dissected; the segments minute; seeds large for the size of the plant, with 8-ribbed ribs; the segments acute and doubly barbed at the summit; growing in dry soils." We have never seen this.

CRAB-GRASS (a corruption of crop-grass.) This is in the natural order *Gramineæ* (grass tribe.) Tribe, *Panicæ*. In this tribe the spikelets are 2-flowered, the lower flower incomplete, usually neuter; glumes of thinner texture than the palææ; the lower one often (rarely both) abortive; palææ more or less coriaceous; commonly awnless; the lower one coneave. Genus, *Panicum*, (from *panis*, bread.) Species, *Sanquale*: Class, *Triandria*: Order, *Digynia*. This plant has also been called *digitaria, sanguinalis*. There is no doubt but that this grass is of foreign origin. It is one of the most valuable annual grasses we have in the South, sheltering the ground from sun and washing rains, making abundance of good, nutritive hay. It is like all annual plants, a pest in cultivated lands, particularly where slovenly work is done. We will trespass on the patience of the reader by describing, scientifically, the *panicum, sanguinalis*, or common crab-grass: "Spikes digitale, erect, spreading; leaves and sheaths somewhat hairy; spikelets oblong; flowers pubescent on the margin. Annual; culm 1—2 feet long, assurgent or de-

eumbent, branching at the base and rooting at the lower joints; leaves often undulate on the margin; spikes 4—6, or sometimes more; rachis flexuous; spikelets in pairs, on short peduncles, arranged in two rows on one side, of a very narrow, flexuous rachis, to which they are closely appressed; inferior spikelets almost sessile; lower glume very minute; the upper lanceolate acute. Abortive; flower without any trace of a superior palea; inferior paleae much longer than the glume. Perfect flower very smooth, nearly orbicular." Flowers from July to October.

There are two other species of crab-grass, the smooth crab-grass and the slender crab-grass, which may be known from the common crab-grass by their somewhat descriptive common names.

We almost conclude, as we write, we hear some of your readers exclaim they wish Abbeville and his botany gibberish in Jericho, or some quite distant place. Well, we ery a' mercy, and try and mend our ways, while we tell Laurens what rag-weed, hogweed, and some other weeds, are:

There are in South Carolina four species of RAG-WEED, called also Hog-weed, Bitter-weed, &c. Natural order, *Compositæ*: Genus, *Ambrosia*. (*Ambrosia* was the food of the gods of the ancients, a pretty rough customer, notwithstanding its poetic name,) of which there are four species in South Carolina. Class, *Syngenesia*: Order, *Necessaria*.

First. *Ambrosia Trifida*—grows in rich soils in the upper districts. Flowers August—September.

Second. *Ambrosia Elatior*—grows in pastures and good soils, in the upper districts of South Carolina. Stem 4 to 7 feet high; flowers July to September.

Third. *Ambrosia Artimisiifolia*—grows in the mountain districts of South Carolina. Stem 4 to 6 feet high; flowers August—September.

Fourth. *Ambrosia Paniculata*: Root annual; stem two to four feet high; very branching; grows in cultivated ground; very common; flowers July to September. The dust or pollen from the flowers of this plant is very irritating to some people, making them sneeze and cough as if they had taken cold.

Plants of the genus *Ambrosia* are valuable as a shade to the ground, and adds something in the way of organic matter, if early turned in. We know of no medicinal qualities. It is rather an unsightly genus.

We come now to the BROOMSEDGE. This is a large and wide-spread genus, containing near six hundred species that are known, two hundred of which are in the limits of the United States; fifty-six species are in South Carolina, probably more.

Broomsedge is in the natural order *Cyperaceæ*: Tribe, *Cariceæ*: Genus, *Carex*, (from *keiro*, to cut;) Class, *Monoecia*: Order, *Triandria*. The species most common in our old fields I cannot now remember. Most of the genii flourish best in damp soil. They are nearly all coarse, wiry grasses. The perennial species shade our old lands, keep them from washing away, and thus act as a reenoperator. Cattle eat it when young rather than perish. There is no doubt but several species of *Carex* have been introduced from Europe.

The plant spoken of by our friend Laurens as "looking like an Aster," we think is an *Erigeron*, which is nearly allied to the Aster tribe.

Erigeron (flea bane) is in the natural order *Compositæ*. Tribe, *Asteroideæ*: Sub-tribe, *Asterineæ*: Division, *Astereæ*: Genus, *Erigeron*, so called from the Greek *er*, the spring, and *geron*, an old man. The most common species is the *Erigeron Canadense*, commonly called Horse-weed, or Butter-weed. This plant is used as a domestic medicine—considered tonic, astringent and diuretic. Common in fields and waste-grounds. We would describe this plant, but we fear your readers would have too much of the big words.

ABBEVILLE.

Proceedings of the Greenville Agricultural Society.

The Committee on Hogs, through their Chairman, Wm. P. M'Fee, Esq., submitted a report, from which we make the following extracts:

"The importance of an agricultural people raising their own meat, and the care and attention requisite, create a necessity for procuring the particular stock of hogs best adapted to our climate, &c., and for pursuing that mode of treatment which will result most advantageously. Unfortunately for the citizens of Greenville, our lands are not so vastly productive of grain that we can afford to fatten our hogs on corn alone, without regard to the quantity consumed. Corn is our great staple, the source from which we receive our greatest income. It is necessary, therefore, that we should ascertain in what manner corn can be fed to hogs with the greatest possible advantage. We should also enquire if there are other articles of produce conducive to the growth of hogs, what they are, and how they should be used. Besides pumpkins, turnips, beets, &c., there is no doubt that fruit, and various grasses, all easily raised, are quite beneficial. It has been ascertained that the most nutritious principle of corn is not extracted from it until it has gone through a chemical process, either by fermentation, or by being pounded and boiled. If such be the case, and it is beyond controversy, why is it that our farmers are so reluctant to adopt that mode of preparing it? Their neglect to do so arises, doubtless, in some cases, from a want of information on the subject, or if they have the information, they have derived it from some agricultural correspondent of a newspaper, in whose statement they have no confidence. The great desideratum then, is, to convince our farmers of the truth and advantages of this mode of fattening hogs, and then persuade them to adopt it."

From the report of the Committee on Mules, handed in by their Chairman, Wm. K. Easley, Esq., the following practical information is selected:

"It is a fact well known that this hybrid (the mule) is stronger than the horse, harder, freer from liability to disease, capable of enduring much greater fatigue, of sus-

taining life on a much less quantity of, and cheaper food; that it is ready for the service of man at a much earlier, and lives to a far greater age than the horse, or any other animal subjected to man's dominion. In countries where great attention is paid to their breeding, they grow to the height of fifteen and sixteen hands, are as thick set as our dray horses, and will travel over mountainous roads for several months at a time, with six or eight hundred weight on their backs. * * * * * Your committee beg to be permitted to suggest to the breeders of mules, that these animals take the size and shape of the body from the mother, and the head and other extremities from the sire. Mares that are of a very large breed and well made should be employed. They should be young, full of life, large barreled, but small limbed, with a moderate sized head and a good forehead. * * * * * It has been found of advantage, by experienced breeders, to have the foals, from the time they are dropped, frequently handled. It gentles them, prevents them from hurting themselves by skittishness and sudden frights. They are much easier broken at the proper age, and become docile and harmless, having nothing of that viciousness which is so commonly complained of in these animals. Indeed, in countries, as in Spain, where great care is taken in the culture of these animals, viciousness is little more, if any, a characteristic of this animal than of the horse.

Coarse food, it is well known, is peculiarly grateful to the mule, as well as essential to its good health and vigor; and in a country like this of ours, so well adapted to the culture of the coarser grasses, nature offers every facility for the rearing of these animals, while the best interests of our people urge them to avail themselves of these advantages."

A lengthy and interesting report from the Committee on Milk Cows is before your Committee, presented by the Chairman, Mr. B. F. Stairley. We make the following extracts:

"It would be useless to recommend any particular food for cattle; every one feeds what is most convenient. The cow can extract nourishment from any matter that contains it. Cotton seed sprinkled with meal

is rich food; corn, crushed cobs and peameal are all excellent; but grain of any sort should always be carefully ground. Cooking food is quite unnecessary; it is departing from nature, and in fair trials, in Scotland, the raw food had the advantage.

The choice of breeds will be difficult to recommend. Each has his favorite. The Devons will suit our pastures better than the Durhams (Short-Horns.) The Ayreshires have a right to enter for the cup on the same pastures. But when the highly prized Alderney shall become more widely disseminated, they may dispute the prize with any of the others; at least, for rich butter. Our common scrub cattle often present instances of extraordinary milking properties. At all future exhibitions of the latter at our Fairs, it is urged that some satisfactory account should be given of their feed and pasture, of the exact quantity of milk given by weight and measure, and the quantity of butter from a given quantity of milk.

There is a breed of cattle not as yet introduced into this country, that, for profit, will excel all others. They are pre-eminently adapted to our mountain ranges. That breed is the West Highland cattle of Scotland, which, in 'Stephens' Book of the Farm,' is thus mentioned:

'The West Highland has long been famed in Scotland as a superior breed of cattle. They have most of the points of the Short-Horns in the body, which is covered with shaggy hair, that bids defiance to the keenest blasts and the most drenching rains.'

"The points to be attended to in judging a good milk cow, are by universal consent, considered to be shape and size of the animal, both as a whole and in detail; texture of the skin and hair; development of the laetiferous parts; temperament, or habit of body and disposition; and finally, strength or indurance of constitution. A maximum development of these points marks out a

first class cow of the breed to which she belongs; but the milking properties differ in endless variety, not merely as these points are prominent or the reverse, but also in proportion to the circumstances of climate soil and treatment. The cooision test of Mr. Guenon is a new element in the question; and when fully established, and better understood, will probably occupy the first rank among the external signs which indicate the natural milking properties of cows; but as yet, it is barely recognised in Britain. How far Mr. Guenon's observations have been born out, will be discussed hereafter; meantime, we shall direct the readers attention to those points which experience has proved to possess a marked influence on the milking properties of cows.

SHAPE.

Whatever may be the breed to which a cow belongs, there are certain points of configuration which are considered essential as regards her milking properties.—There may be, and are frequently, great discrepancies between the one and the other; but still, generally speaking, the rule holds good that, all things being alike, the cow which approaches nearest to a certain standard will be the best miker. The head must be rather lengthy, especially from the eye to the point of the nose; the nose and muzzle should be cleanly cut, and free from thick skin or fleshy lumps; the cheek bones thin, and in like manner devoid of thick skin or flesh (not thickchapped); eye prominent, of a placid and benignant expression, with little of the white exposed to view. If horned, the horns should taper gradually to a point, and have a clean surface, free from regosites; the breed will determine the shape and set of the horns. The neck should be long, thin, and free from loose skin. A good cow may be deer or ewe necked, but never bull necked. The chest and breast should be deep, rather than broad, and the brisket should project downward

and forward ; and, whether large or otherwise, should be round, well shaped, and without loose folds of skin depending upon it. The girth behind the shoulders moderate, and arising more from depth than breadth of chest ; shoulders rather narrow at top ; back-bone on a line with the shoulder-top ; ribs arched, and well home to the haunch bones, which should be wide apart, and form a straight line across, neither depressed in the centre, at the vertebrae, nor drooping at the extremities ; hind quarters lengthy, and the rump or tailtop nearly on a line with the back-bone ; thighs rather thin, but broad, well spread, and giving plenty of room for the udder ; belly projecting outward rather than downward, with plenty of room for food ; the udder should be larger in a lineal direction—that is, well backward as well as upward—between the hind legs and forward on the belly ; also broad in front, filling up the space between the lower flanks, but rather short vertically—a deep hanging under, from its swing motion, being always the cause of great fatigue to the animal when walking ; the teats should be moderately long, straight, and equal in thickness from the udder to the point, and also at considerable and equal distances from each other ; the two front teats especially should be well apart and the direction of all four should be outward. When full of milk, the udder should be greatly enlarged in size, and when newly emptied, shrink in a corresponding degree, and the skin gather into soft creases. The mammary veins running on each side of the belly, large throughout their whole course, and swelling into large puffs at or near their junction with the udder ; thigh veins also large and easily felt by the hand.

Of all these shapes the more important are the long, finely formed head ; long, thin neck ; rump nearly in a line with the back-bone ; broad quarters ; long udders from back to front ; and large veins underneath

the belly, and downward, from the loins and thigh, to udder. When seen in front, the body of a good milk cow should present the appearance of a blunted wedge, the apex of which is the breast and shoulder.—Seen from behind, she should present a square, well spread shape. Seen sideways she should be lengthy, but not lanky.

SKIN, HAIR AND COLOR.

The skin is ever a true index of the milking proprieities of the cow. It should be soft and flexible on every part of the body, especially on the back ribs, and also on the rump-bones, situated on each side of the insertion of the tail. The latter is a point much prized by dairy men ; so much so that a very successful farmer in Cheshire, Mr. Jabez Wright, told the writer, that in buying a cow, if the skin on the rump was soft and easily lifted from the bone, he never sought for further signs of her milking powers. Of course, while feeling this point Mr. Wright's practieed eye would at once take in at a glance, those other points which constitute the *tout ensemble* of a good milker ; but the one referred to, he considered indispensable. The skin in these parts will vary, however, according to the condition of the cow. If full of flesh, the skin may be loose, and yet the animal be a poor milker ; but if in lean condition, with loose skin on the rump bone she will milk well and fatten quickly when dry. The skin on the ribs is of the next importance ; and if it corresponds in softness and looseness with that on the rump-bones, another point of excellence is established. These two points conjoined, are correct exponents of the internal constitution, and are always accompanied with more than an average tendency to milk freely and fatten rapidly. The former indicates a more than ordinary power of producing milk ; the latter a great aptitude to fatten ; and their conjoined presence indicates the union of both tendencies.—The skin on the udder generally partakes of

the quality of that on the rump and ribs, and will therefore be soft and flexible, in proportion to their softness and flexibility. Still there is a difference to be observed, viz: that the skin of the udder must not be thick, whereas thickness on the rump and ribs is quite consistent with the best properties, provided it be loose, soft and flexible. In fact, a thick, soft hide, generally indicates hardness of constitution, from its great capability to resist or modify external influences, whether of climate or cuticular irritation from the bites of insects.

The hair is the next point to be studied. It should be moderately long, closely set, and above all, soft and woolly. As the thick soft skin is an indication of hardness, much more so is this the case when covered with long, thick wooly hair. A bare, hard hared cow, is ever to be avoided by the dairy-man as well as the grazier. If even a moderate milker, yet she will be a great eater, and never pay for her food.

Color is immaterial, and depends on the breed. A brown cow is supposed to give milk rich in butter, while a black one gives much milk, which is poorer in butter. A white cow looks larger than she really is, while a black one looks smaller. According to the law of absorption and the radiation of heat, a black cow will absorb more solar heat in summer, and radiate, or throw off a large amount of heat in winter. On the other hand, a white cow will absorb less heat in summer, and radiate less in winter; and the practical result is, that the black cow is too warm in summer and too cold in winter, while the white one is cool in summer and warm in winter. This is somewhat opposed to the general idea on the subject, which attributes a cold appearance to a white animal in winter, and the contrary to a black one; but that this is a popular fallacy may be seen, independent of the scientific explanation of the phenomenon,

from the fact that the native or wild breed of cattle in Britain were all white, and are so still in Chillingham Park, where the animals are never housed; and also from the fact that the white is the prevailing color of all arctic animals—bears, foxes and hares all being of this hue. The practical conclusions deducible from the fact that a black cow absorbs much heat in summer and radiates much in winter, are: *first*, she must be more susceptible of, and more injured by sudden atmospheric changes than a white cow; *secondly*, in cold weather she will lose much heat by radiation, and hence must eat more food to keep up the animal heat at its proper temperature. Again, in warm weather she will require less food for this purpose than a white cow but will be oppressed by heat and more liable to profuse perspiration. The result of these conditions on the milking properties of the two animals will be, that the black cow will be liable to have her milk injured in quality by excess of heat, and consequent irritation of the system, and profuse perspiration, in summer; while on the other hand, the cream or oily part of it will be diminished in quantity in cold weather, by the cow using more of the food she eats to keep up the natural heat of her blood. This accounts, in some degree, for the popular notion, that the milk of a black cow is generally poorer in butter than that of a white or mixed color.

TEMPERAMENT AND CONSTITUTION.

Animals, like human beings, are differently developed in their nervous, sanguinary, muscular and lymphatic constitutions, and their tempers and disposition vary accordingly. Each breed of cattle is characterised by peculiarities of temper, activity and endurance. The Ayrshire cow presents a good specimen of the union of the nervous and sanguine temperaments, in which the latter predominates. The North Highland kylee also possesses a union of the same temperaments, but the nervous predominates, which gives her a restless and even fierce aspect. The short-horn possesses a temperament in which the lymphatic temperament is largely developed; she is slow and sluggish, but all the more disposed to fatten on that account. The muscular temperament is disappearing before

the march of improvement, as animals of this description are neither good for the grainer nor the dairy, being fleshy, thick-skinned, and poor milkers. Constitution is the result of natural temperament and physical configuration, but each temperament has its own particular diseases to which it is liable. The nervous temperament predisposes to fevers, the sanguine to inflammations, and the lymphatic to lung diseases; but as these temperaments are never found distinct, but always combined together in some proportion or other, the peculiar diseases to which these unions give rise are as endless as the constitutions themselves.

Atmospheric causes, and artificial treatment, also impress certain physiological characteristics upon cattle. Exposure to cold, when young, has a tendency to develop those parts of the system whose office it is to protect the vital functions from being injured by this cause. When an animal is early exposed to cold, the hide thickens, and becomes covered with long thick hair. It becomes inured to exposure, and is little affected by atmospheric changes. A long continuance of such treatment, as in the case of the kyloes, from one generation to another, soon impresses a peculiar habit of growth upon them, and this in time settles into a fixed and permanent temperament, or physiological character. Even, however, among individuals of the same external influences, there are great discrepancies as regards individual constitutions. Some are more hardy than others, simply because certain causes either accidentally or designedly induced, having given them better digestive powers, stronger lungs, and more vital energy. This superiority of constitution, whatever may be its cause, is generally indicated by a large round body, a soft flexible skin, by no means thin, which is covered with a thick coat of soft, silky, or wooly hair. A large paunch is usually the sign of an animal which can and will consume a great quantity of fodder in the shape of hay or straw; and this we know by experience, to be one of the best indications of a good, healthy, hearty, thriving animal, whether cow, horse or sheep.—Strength of constitution can be transmitted as well as other peculiarities; so that a careful breeder, by always breeding from animals that he knows to be of good con-

stitution, will ultimately succeed in strengthening and improving his stock."

The foregoing embraces selections from all the reports presented to your Committee, and contain, in their judgment, the most useful extracts that could be made. There is interesting matter in them all, which your Committee regret cannot be sufficiently condensed for the columns of a newspaper.

All of which is respectfully submitted.

From the Boston Medical and Surgical Journal.

Essays on Bees.

SIR—Agreeably to your request, I send you the following brief treatise as the result of my observations and experiments on the rearing and management of bees, which I submit to your consideration and disposal.

Having attended to the management of bees during a period of about fifteen years, and having a curiosity to know how the colonies were produced and sustained together with the various operations which they pass through in constructing their cells and storing the same, I have paid particular attention, as far as possible, to all their movements. For this purpose I provided hives with glass lights, by which means all their operations are easily discovered and ascertained; and by which (among other things) I have brought to light the object of my wish in regard to the mistaken theory, that the queen bee, so termed, is a female and the only producer of all the colonies—a doctrine inconsistent and unnatural to which I never gave full credit, though sustained by the generality of apiarists and writers on the breeding and economy of bees.

Having examined several periodicals, of which the Boston Cultivator is one, containing instructions on rearing bees and their modus operandi. I am inclined to think their examinations have not been so effectual as those which I have made.—Therefore I shall endeavor to show that the majority of bee-breeders are in error with regard to the production of colonies.

Firstly, their must be three kinds of bee, to form a perfect colony—males, females and workers or neuters. Without the two former, there would be no increase of the colony; and by the death or loss of the

male the colony would dwindle and become extinct.

There is one bee upon which the dependence of the colony is founded, and by a large majority, if not by all apiarists, that bee is, and ever has been, styled *queen*, of course a *female*, which, they say, lays all the eggs, or spraws as some term them, and one writer (Spencer) says she lays from ten thousand to thirty thousand per year. But his authority at most is but secondary, as he states that he received his information from another apiarist.

I was recently informed by an apiarist that the queen left the hive only on two occasions; one was to swarm and the other to be gendered by a drone, which he stated was male; that the queen went out with him into the air and became impregnated by him, after which she returned to the hive but the drone never did. This he stated to be not from his own observation, but by information from others. I told him this was an erroneous idea, and the knowledge which I acquired was sufficient to verify my assertion. A few years since, on purpose to ascertain this point, I furnished a small hive with glass lights, and in it I placed a small late swarm, which amounted to, at most, not over one pint of bees, it being the fifth swarm from the hive. I first laid them on a board for examination, in order to find the queen, so called; and, to my satisfaction, soon found her, but not one drone was found among them. I placed the hive over them, and they readily went up. a few days after this, I caught some drones from another swarm, let one of them into this hive, and watched its motions. It crawled on the floor of the hive for a little distance, when the *so-called "queen"* dropped down and gendered the drone, similar to that of a house-fly. I then put in two more drones, which it did not touch; but on putting in the fourth, the operation was again performed. This I saw plainly, so that there can be no mistake; and it satisfied me that apiarists and others are and have been laboring under a mistake in calling that bee a *queen*. It is a male bee, and should hereafter take the title of *king*; and the drones, are females, which lay the eggs or spawns. Would it not be an extraordinary circumstance in the order of natural creation to have so many males for the use of one female? Naturalist must pro-

nounce it an error through ignorance, a phenomenon not known with regard to any other race of animals or insects on earth.

To prove this theory correct, I have dissected this king bee, and with the aid of a glass have found both the sting and organ of generation, both being plainly seen at the same time. Any one who wishes to satisfy himself on this point, may do so by pressing the posterior part of the king bee between his thumb and finger, which will protrude both the sting and generative organ so that they may be seen by the naked eye, which will convince him who is disposed to make the experiment. An apiarist, who had kept bees for several years, with some others who saw me make the experiment by dissection upon two king bees found dead at the mouth of the hives, were satisfied that the hypothesis was strictly correct.

Furthermore, I have dissected drones, or the females, and have found the eggs or spawns in some of them, but not in all.—This was in the presence of an old apiarist who had kept bees for thirty years, and also some others who were present at the time; all were satisfied with the experiment, and decided that drones are female bees.—The examination was in August, the present season, although I had made examinations some years previous, and the result was as satisfactory as at the present time.

Another circumstance I have observed for several seasons; that is, when there is likely to be a scarcity of honey in the fore part of the season, even in the time of breeding, the bees would kill off a portion of the drones. Why should this be, if they are not females? for without doubt this civil war is to prevent a portion of the breeding on account of the scarcity of honey. This circumstance took place in June of the present year, 1853.

All writers on bees agree that the working bees have nothing to do with the breeding, except keeping the eggs and young brood warm. This agrees with my observation and experience.

When I first began to keep bees I thought but little about the nature of them or their operations, until by conversation with several apiarists and the reading of various publications, I began to consider whether their statements were based in philosophical principles, for it appeared to me there was an error lurking somewhere between us; for I could not make it appear consist-

ent with reason and the natural laws of creation, that such a numerous progeny of insects of any race, could be produced by one female, impregnated by several hundreds of males or drones according to the common absurd theory; and I am still surprised that the credulity of man should be so long imposed upon, seeing the fact can be so easily ascertained.

Under these considerations, I began to investigate the subject in order to ascertain, if possible, which were the progenitors or males, and which were the females of the numerous colonies; and I have at last come to satisfactory and unerring conclusion, that the bee universally called *queen* is the male, and that the drones are females which produce all the young swarms.

APIARIUS MEDICUS.

[From the Southern Planter.]

To Eradicate Sassafras.

MR. EDITOR:—I notice that in the Schedule of Premiums to be awarded at the coming State Agricultural Fair, \$30 are offered for the best mode of destroying Sassafras bushes. I feel persuaded that I have discovered the most effective mode, and as I am desirous that it should be restored to generally, I now state, that from ten years experience, I find that a handful of salt thrown at the root of each bush, or if they stand very thick, a pretty heavy broadcast of salt, if applied during the month of May and in a field that is to be pastured that season, will most effectually eradicate it. One of the fields on the farm I now occupy was greatly infested with them when I came in possession of it, and it is now so entirely clear of it, that it would be difficult to get enough for a cup of Tea.

Yours respectfully. P. D. VENABLE.

Wheatland, April 5th 1853

The above was overlooked for May. We publish it now, thinking that June cannot be too late for those who choose to try the experiment.—ED. S. P.

We publish the above, believing the remedy a most effectual one, but would advise our readers to make a calculation before they determine on the experiment, for a "handful on each root" will require "some salt," if the bushes stand as thick as we frequently see them. Suppose they stand one foot apart—and we have often seen them thicker when small—then there will stand on one

acre 43,560 bushes. Again, suppose each handful to be one gill, liquid measure, which is not a large handful. One bushel contains about 320 gills. Divide 43,560 by 320, and we have 136 bushels, which will be required to spread over one acre. But Mr. V. would, on land as thickly set as this, give a "pretty heavy broadcast," which is indefinite. But it seems to us it would prove an expensive operation any way, for, at even three feet to each plant there would be required about 15½ bushels per acre, which, at the price we have paid in Pendleton, just above the head of the Railroad, this spring, would amount to \$22½. Better buy Guano.—EDS. F. AND P.

[From the Southern Planter.]

On the Application of Guano for Corn.

MR. EDITOR:—I have been using this manure for several years, in various ways on the corn crop: viz. in the hill, drill and broadcast. I tried these several ways to ascertain the best mode of application, as well as to improve and benefit the land, and make the best crops. I laid off a piece of land, say three acres; on the first I put about 200 lbs. per acre; on the second about the same quantity; on the last, broadcast about 150 lbs. per acre; all of it being poor, but originally good, of a soft gray nature. The first named experiment, the guano in hills and drills, grew off finely at first, and promised to be very superior—but usually there is a pinch upon corn about making time, and at that time it began to fade, and made but a very moderate yield; that in the drill about the same result; that sowed broadcast made a most excellent crop, and yielded about double. I would say to my brother farmers, never use guano any other way than broadcast, except for vegetables. The time of application, from experiment, is the first weeding of the corn. Sow two rows at a time, just ahead of the plows. When sown broadcast it improves the land more generally, and prepares it for small grain. I am now using from 200 to 300 lbs. to the acre. I prefer 300 hundred lbs. because you will be enabled to get two crops from the same manuring. I would say more about the mode of culture, but deem it unnecessary. In conclusion I would remark for the benefit of practical men, that if there is any merit in my suggestions the plan is easy and can be adopted by the great body of planters. EDWIN J. REDD.

Prince Edward, May 6th 1854.

[From the *Rural New Yorker*.]

The Object of Plowing.

The object of plowing is not fully understood and considered by the majority of those who perform the work; if it were, it would be done more faithfully and thoroughly. It is not alone to kill the weeds and grass, nor even to furnish a soed bed of fresh turned soil for planting or sowing —now anything which looks merely to the inversion of sod—which constitutes good plowing. Large plows, turning a wide and shallow furrow, will show a large days work—but the work is very imperfectly accomplished, when the true object of plowing is considered. The chief value of plowing is the preparation it gives the soil for producing vegetation—for giving to the plants sown or planted, the elements of growth and fruitfulness. It should thoroughly pulverize and loosen the texture of the soil, and thus, admit a free circulation of air and moisture which, by chemical action, disintegrates or breaks down the stony or mineral portions of the same, so that they may be more readily dissolved and taken up by the roots.

In a soil thus plowed—thus prepared for yielding its support to vegetable life—plants can appropriate from far and near, the nutriment needed for their growth. It is dissolved and ready for their use—not hidden in unbroken clods or slumbering in an undisturbed sub-soil—but awaits their action in a friable and penetrable state, where every hungry rootlet, sent out to gather nourishment for its parent plant, may find and appropriate it. It is truly wonderful how full of minute roots the soil of a corn-field becomes, and if that soil is fine and deep, the deeper and closer together will the fibres permeate and intersect it. This is true of all other crops, and while the leaves and fruit depend so intimately on the vigor and extent of the roots, these facts should always be taken into consideration among the objects of plowing.

Fineness and depth of soil are requisite in order to receive the full benefit of the manures applied. It is not fertilizing food in its crude state which assists vegetation—it must first become intimately mixed with, or in fact, a part of the soil. Barn-yard manure especially, seems of little worth, while forming visible layers between the clods of a half plowed soil—it is often dry and coarse—and rather shunned than sought

by the roots sent out to forage for suitable food. If a well prepared soil has any strength and virtue, it will yield it readily; and poor land in good tilth is often more productive than better soils less perfectly prepared. The influence of air and moisture, have freedom to work, and they are no laggards in gathering means to supply the wants of vegetation.

With these hints on the object of plowing, we might connect others on the process—the best means of accomplishing that object—but prefer to leave it for other pens.—Will our practical farmers, who have thought and experimented upon the subject, tell us what plow, and what depth and width of furrow, taking also soil, season, team and time into consideration, most thoroughly loosens, pulverises and inverts the soil! This information would be of much value to every farmer, and is especially needed in the present state of agricultural progress—for taking the country at large into account, plowing is more imperfectly performed than any other part of farm husbandry B.

How to Winter One Hundred Sheep from two acres of Land.

We have been accused of inducing farmers to try visionary experiments. We hardly know what meaning those who use the word visionary would put to it in this connection, nor do we care. We have faith in the following project of producing fodder enough on two acres of land to winter one hundred sheep. But, says Mr. Doubtful, it must be made very rich. Of course it must. That won't hurt the land in the least. But how will you do it? In the first place make the land very rich. Manure it generously—plough it thoroughly—harrow it fine—roll it smooth—put on the marker and mark it into rows three feet apart, and sow Indian corn in drills. Hoe it twice, and after the second hoeing take your seed-sower and sow between each two rows of corn a row of flat turnip seed. After your corn has spindled, cut it up; let it wilt, then tie it into bundles and shock it up as you do corn-stalks which you have cut in the usual way, and let them stand until dry.

It would not be strange if you had six tons of fodder per acre when they were sufficiently dry to put into the barn. This will be twelve tons, (from two acres.) Now, to winter one hundred sheep you ought to have twenty tons of fodder. You have got twelve of them and want eight more, or four tons from each acre. The turnips ought to produce this amount. Let us see. Allowing a bushel of turnips to weigh sixty pounds, in order to have four tons on an acre you should raise $133\frac{1}{2}$ bushels. Will not your land produce this amount after taking away the Indian corn crop?

So you will have your twenty tons of food from two acres. But will the sheep eat the corn-stalks? Yes we have tried that. Just run the stalks through a straw-cutter and feed them out to the sheep, and they will eat them all up. We have tried it and several others have tried it. Then run your turnips through a vegetable cutter, and they will eat them all up clean. The sheep should be young and hearty, and have good teeth. Who will try the experiment this year? We are bound to, for one.*

[*Maine Farmer.*]

*And we for another.—EDS. F. AND P.

[From the New Era.]

Farmers, Study your Profession.

MR. EDITOR:—It is somewhat strange that the little time farmers devote to literary pursuits, they spend in acquiring *political* in preference to *agricultural* knowledge. We now address the farming community.

The lawyer spends his time poring over his law books, acquiring a knowledge of jurisprudence. The physician dissects the human body ascertains the precise location of every artery, vein, muscle, nerve, bone, &c. &c., acquires a knowledge of the conditions of health, and the causes of disease. The minister ponders over the Sacred Scriptures, and reads works that will afford him a knowledge of divinity. In short,

they all “study their profession.” Now, how is it with the great mass of those who devote their time to tilling the soil? You profess to be farmers—agriculturists—and yet almost the sum total of your reading and study is of a political character. We are denominated a nation of farmers; yet we patronise and support about three thousand *political*, and but sixty or seventy *agricultural*, papers—about in the ratio of forty-five to one. The greatest source of our nation’s wealth and prosperity is in her agriculture. Our schools and colleges for disseminating a knowledge of the professions of law, medicine, and divinity, are numerous (all well enough;) yet the whole nation can scarcely boast of one such institution for the spread of a scientific knowledge of agricultural operations. We read with delight and admiration of our vast exports of agricultural products; yet do little or nothing, in the aggregate, to keep up the productiveness of our virgin soil. We boast of our privilege of having a voice in the elevation of our officers; yet vote for men unskilled in our profession, who will legislate on any and every subject save, that of spreading abroad a scientific knowledge of agricultural pursuits. Each State, county and town throughout the Union, almost, has its regular meetings for the discussion of political topics; yet how few such societies meet regularly and exclusively for the discussion of agricultural topics, compared with the political.

Now, farmers, our appeal is to you—to you, who have the power of swaying every legislative body in the Union—to you, who may say to them, Legislate for us, encourage our profession, attend to our wants, do what you can at least to aid us in discharging successfully the most important duty devolving upon man, or it shall be our most imperative duty to act the part of a Cromwell—to throw you out of our employ, and place those in your stead, who will do our

bidding. We say, to *you* the question is asked. Shall this system of things continue so long as "water runs" and mankind are born with the demand of food stamped upon their constitutions? We have more confidence and faith in the growing intelligence of American farmers than to believe that such a system of things will long be permitted to exist. Farmers, awake! behold your dignity and your strength! Exercise the power you have for your own best interests and the good of the race, and your wants will not be neglected. Every farmer, or tiller of the soil, may aid in this great work.

If your library consists of but half a dozen volumes, let one at least be devoted to agriculture. If you obtain and read two periodicals, let one be devoted to agricultural topics. And since farming is your profession, if you should read four or more papers, let two or more be devoted to the same subject. If in the future you should contribute your mite for the creation and support of two institutions of learning, let one be an agricultural school or college. If you have two sons to be educated, let one have an agricultural education, if such can be had in America—if not, patronise the schools of the "Old World." If you attend conventions, fail not to attend the agricultural convention. If one of two associations is to be attended, political or agricultural, patronise the latter. When you cast your vote into the ballot box, let it be for one who will advocate bodily and faithfully the interests of your profession.

If every farmer would attend as closely to his own profession as here set forth, or as the minister to his text, how long, think you, it would be till the farmer's calling would be as honorable as though he were classed with the titled nobility? How long think you, it would be till the farmer's profession would be sought by the educated, the talented and the wealthy? How long

before his occupation would be loved, desired, admired and sought?

A YOUNG FARMER.
Strattonville, Pa.

[For the Farmer and Planter.]
Curl Leaf of the Peach.

Messrs. Editors: In your November number of last year I saw a piece headed "The Curl Leaf of the Peach," and asking for a remedy. I do not know that I can give a remedy that will give general satisfaction, but I will give one that has satisfied my mind on the subject. In the year '47 I set out a nice apple and peach orchard. All the peach trees soon commenced bearing except one tree, and that bloomed, but did not bear fruit, which I noticed for two years in succession, being as full of blooms in the spring as any tree in the orchard, but soon dropped its fruit, and the leaves all curled and twisted in the manner described in your paper. I could not imagine the cause, neither do I know yet, but I concluded to try an experiment on this one tree; so I bored with a three-quarter auger about three-fourths through the body of the tree, and filled the hole with finely pounded sulphur, and then drove in a wooden pin tolerably tight. This operation was performed in April, (if I mistake not,) before the fruit dropped, and a little after the leaves had begun to curl, and to my great astonishment, the leaves, in a short time, in part, uncurled, and the fruit hung on the tree until it was ripe. The tree has never had the curl leaf since, and it has borne good fruit until the present time, which is four years.

In the years '49 and '50 I noticed that a certain apple-tree in my orchard was on the decline, and in the fall of the last named year I thought it would die, but it did not. The next spring it put forth leaves, though late, and on examination I found that it had been sucked severely by some kind of insects, but what kind I could not tell, al-

though I saw some of them. I applied the sulphur in the same manner to the apple-tree that I did to the peach-tree, and with the same pleasing result. The leaves turned green, and seemed to grow larger, new sprouts put forth and grew finely, and in a short time the whole tree was in a healthy and flourishing condition, bearing fruit and doing well ever since.

If you think the above written experiments worthy a place in your much esteemed paper, please place them there, but if not worthy, throw them aside as you would other rubbish, which is altogether useless, and oblige your unworthy servant,

ALBERT G. TURNER.

Oak Cottage, May 11, 1854.

To Make Corn Ear Low.

CHESTER, S. C., May 24, 1854.

Editors Farmer and Planter: You ask, "What course would our readers take to have ears of corn come out near the root of the stalk?" We recommend to plant the grains from near the large end of the cob; plant no grains above the middle of the cob. I make this suggestion from once having planted the grains from the small end of the cob; the stalks grew two feet taller than the others planted from the same cob. The ears came out very high, so much so as to appear unnatural.

Yours truly,

I. M.

REMARKS.—We thank Dr. M. for the above communication, as it may elicit discussion. Have others of our subscribers made experiments in planting the grains of the different ends of the ear? Our practice has been to reject the imperfectly formed grains at both ends. If the seed taken from the butt end will produce ears nearest the root of the plant, as suggested by our correspondent, then corn in this respect differs from vines, the seed from the fruit of which, (melons, &c.) taken from near the blossom end, as we have found by experiment, will produce fruit nearer

the root than if taken from the stem end. We are aware that early planted corn will throw out ears nearer the ground than late planted, but in both instances there will be found a great want of uniformity in the height of the ears in the same field. Is it owing to the influence of the seed?

The Oregon Pea.

We will now tell your readers, Messrs. Editors, all we recollect about what is now called the Oregon Pea. Some twenty years since, being on a visit to Columbia, we called on Mr. Herbemont, (who will be remembered by many of your readers for his praiseworthy attempts to introduce grape culture into this country, and whose memory is dear to every lover of fruit or flower around Columbia, which owes much of its present garden-like appearance to the taste and zeal of Mr. Herbemont and his accomplished lady,) who presented us with about a peck of what he called "the clover pea of the South of France." We drilled between corn. They grew from three to four feet high on good land, or with a liberal dressing of manure they will reach five to six feet. They bear well, and we consider them one of the best of the leguminous plants for our climate. They are a vetch, of the arborescent kind, growing something like cotton. The pea is of a subdued green color, looking much like okra seed; nearly the same size. They are fine for culinary purposes in winter, swelling to four times their size in the dried state when boiled, and taste very much like what we call English peas. It was from their good qualities as a table pea that we lost seed. Darkey, though a gross feeder, is somewhat of an epicure, and having no thought or care of to-morrow, he will eat up the last seed of any sort, if it suits his taste. We put away, in a stable loft, fourteen bushels of these peas for seed, not thinking any more about them till near planting time, when, to my mortification, the last pea was gone; so there was an end of the matter. Darkey eat them all up! during the winter.

They now appear under a new name, and with what is better, a wonderfully improved character, particularly that of growing best on poor land; this may be so, but it is cer-

tainly at variance with our experience. We think it would be safe to take off 75 per cent. of reported good, and then we would say they are an excellent plant for our climate and modes of agriculture.

They are in the natural order *Leguminosæ*: sub-order, *Papillionæ*. Tribe, *Viciae*: genus, *Vicia*, or vetch. The species not re-collected, but we have a few of them to plant, which will be examined, if we live to see them grow. We gave this pea to many from distant parts; it may be they have traveled to Oregon, and returned back to the East much improved by Western influences. A dollar a pint is pretty strong, even for a traveled vetch. They could be imported from France for a great deal less. But this is an age of * * * * (we might as well out with it) dollar making!

ABBEVILLE.

Chinquepin Ridge, April 17, 1854.

P. S. The Oregon pea may be the *Vicia Fructicosa*, (*Orobus Tomentosus* of Despont.) a native of the hilly country near Huanuco, in Peru. The genus *Vicia* contains some fifty or sixty species, and probably more.

[For the Farmer and Planter.]

Raising Hogs.

Messrs. Editors: I see much said in your valuable paper on the modes of planting, farming, ditching, grading, horizontalising, stock raising, &c., and I can give my views on all of them, and many others, verbally, but I fear my inability to write, as I have not the gift thus to communicate my views, nor the benefit of a liberal education.

I will mention my experience in raising hogs for five years in succession, and if I have time to write, I will give my experience on all those matters, and many others, but I dislike to do it, as it consumes too much time to write. I can say more in one hour than I can write in one day. [For five years I attended to my hogs myself, and, rating corn at fifty cents per bushel, my meat cost me 2½ cents per pound, neat. Some years it would go a fraction over, and

some years a fraction under, but I would say 2½ is the average.] Beat this, who can.

ECCENTRICK.

Abbeville. June 12, 1854.

REMARKS.—We shall be pleased to hear from you, friend "Eccentrick," on any of the above subjects upon which you may find leisure to write, and especially would we like to hear your *modus operandi* of making pork at 2½ cents per pound, neat. If you can learn us that art, you will have done more for your brethren than most men have done for the advancement of their interests. Just such articles we want, no matter how plainly written. We care not much about knowing that a man has raised a hog weighing 500 or 1000 pounds, but what we want to know is, how much it costs per pound to raise it.

To your enquiries respecting leaves and lime, we answer, we do not think it will pay, lime costing fifty cents a bushel. Leaves and soil raked up in the woods, deposited in furrows, sprinkled with lime and ridged on, if done in the fall, or fore part of the winter, would, no doubt, add very materially to the next crop, but we should recommend but little lime at fifty cents per bushel.—ED.

[From the Farmer and Visitor.]

Value of Barn-Yard Manure.

MR. EDITOR :—I am glad to see that you have so many intelligent, correspondents, who pursue their studies on the subject of manure; for manure well made and wisely applied, is the life of farming. It is gratifying to know that such an interest is excited in this matter. When it is fully investigated, it will be found that the best and most valuable of all manure is farm-yard manure, and that others are valuable only as they contain the elements of this. It is the standard, the model manure, and the object of all artificial manure is in part or in whole, to imitate or replace it. Nothing is more worthy of being remembered. From the avidity with which artificial manures are sought, it would seem as if men thought that they had discovered something of extraordinary virtue, altogether new and unlike anything else; something to take the place of barn-yard manure. Not at all.—All the virtue there is in Guano, or in the phosphate of lime, is also in the barn-yard

manure, or in the excrements of man. Only in the former it exists in a more concentrated form. Hence, a smaller quantity goes farther, and is more easily applied. If the farmer had enough of barn-yard manure he would need no Guano or superphosphate. Unless the expense of working over and using the home-made, should exceed the expense of the imported.

We use Guano because our barn-cellars do not furnish a sufficient quantity of compost. It is so much added to my stock, in the reasonable hope that the increased productions of the farm will repay the cost.—But as all flesh is grass, so the elements of manure are all derived ultimately from the earth, and mostly from vegetables. The animaleculæ of the ocean, feed on sea plants, which are provided for them in immense quantities. The smallest fishes live on the animaleculæ. Fishes somewhat larger live on the little ones. Birds eat the fishes.—The excrement of the birds is Guano. As barn-yard manure is the excrement of animals fed on vegetables, so Guano is the last result of ocean vegetation. The same elements in different proportions, are found in both. In both cases, what is taken from the earth, is given back to it. This is the only principle on which agriculture can be permanently or profitably conducted on average soils. The question is not about the fertile soil of virgin land; nor about sands too barren for cultivation: but what shall we do with average soils? The answer is, put back what you take off in crops, or your land will run out. This is what we do, or mean to do, by all use of manure. Now, here is another point closely connected with this. Most wild or natural plants, extract from the soil certain amounts of phosphates, but our cultivated plants, especially grains contain very much larger amounts. I require, for my support, great quantities of the several grains. Hence, the necessity of furnishing to the soil the kind and amount of manure demanded by these grains. They will not go on for a long series of years reproducing themselves from the same soil, like wild plants. And nothing but manure in a more or less concentrated form, will supply the deficiency created by their exhaustive power. The farmer's barn-yard, if its contents are properly composted, answers almost all purposes; and what he wants of artificial manure, is to eke out the stock. Under the word barn-yard, I in-

clude the excrements of the family, the most valuable of all manures, taking it for granted that they are worked up with the rest. I call them the most valuable because they are made from precisely those articles of food which contain the largest quantities of stimulating elements. He who neglects the privy, throws away money.

In one respect, barn-yard manure has an advantage over all others. It is composed of animal and vegetable matters, the excrements of cattle, leaves, roots, hay, mud &c. That is, if I may so say, it is well balanced, containing no great excess or deficiency of any essential element of crops. Hence, if a farmer has enough of it, his land is kept in a better uniform condition, and is better adapted to all sorts of crops, than any other manure could make it. A special manure, as Guano, bone-dust, or gypsum, acts "by exhausting the soil so far as it has any influence, of all the other necessary ingredients." That is to say, it is a partial not a complete manure; and for that reason, will not bear to be used for a long succession of years like barn-yard manure. For specific purposes, and a limited time, nothing can be better. It is easily applied, and produces a heavy crop; but if often repeated, fails as has been seen again and again, in the case of lime. The first time lime is used on land adapted to it, an increased crop follows—not as if it actually entered into the composition of the crops, but by enabling the roots of the plants to assimilate all the valuable alkalies, or other nutritive matter in the soil. In other words, it acts as a solvent of matters otherwise insoluble. Now, with each succeeding crop, there is an increased deficiency of those materials on which the lime operates. And as those materials are as necessary as ever, of course there is a failure. Hence comes the necessity of a rotation, of crops, that the balance may be restored. Such is the operation of a special manure—excellent for a time, but not to be repeated year after year, because more exhausting than compost.

M.

He who would mount the hill of knowledge and science, must not sleep his youth away, with the hope that others will provide him a safe and sure conveyance.



The Farmer and Planter.

PENDLETON, S. C.

Vol. V., No. 7. : : : July, 1854.

Sheep, Dogs, etc.

The attention of our readers is called to an article in our present number on raising food for sheep. Who will make the experiment? There will be time enough after this number comes to hand. We prefer sowing corn late for fodder. If you have no sheep, you have, no doubt, *more* cattle than you ought to keep for your own interests, and the corn-fodder and turnips will answer for them fully as well as for sheep; indeed, we think *better*, so far as the fodder is concerned. But, although we are much in favor of sheep raising, both as a source of profit and as an important link in the chain of improvement of our worn out lands, yet we are not quite sure that we are doing full justice to our subscribers in encouraging them to enter into it to any extent, whilst our State and the whole South is overrun with packs of curs, whelps and pups of high and low degree, and under the protection of our laws. [The game of sheep raising is not worth the candle, whilst our legislators are too much afraid of their popularity with the "dear people" to enact laws for the suppression of the dog nuisance to all good society. If we had a law allowing one dog on each farm to be kept free of tax, but on all over one, a tax of, say 25 or 50 cents for the first, and doubling on every one over that, with an additional clause taxing each white man or woman for allowing a Negro to keep a dog, not less than five dollars for each so kept, it would, we feel quite certain, in a very short time, reduce our cur population at least 500 per cent., and increase the number of sheep in as great a ratio.] As to the fear of the people, we don't

believe a word of it. We should not be afraid to go before the people with all our prejudices against the canine race. If there were no other objections to us we should not fear success. We know there are many gentlemen in the State that are greatly attached to their packs of hounds. Such men would, however, be found, we venture, almost to a man, in favor of the law. They would most cheerfully pay the tax, in order to have the thousands of useless, prowling curs destroyed. Even poor men would prefer paying a tax on one or two *good* dogs, to having the country overrun with worthless ones. As to Negroes being allowed to raise and keep dogs by their owners, we consider it an outrage on every decent community. The man that suffers it is certainly—and oftentimes, no doubt, without reflection—too regardless of his own and of his neighbor's interest. If, instead of allowing his Negro to raise a dog, he would give him a pig to raise, it would cost him no more, and very probably much less. What a Negro would feed to a dog—for whoever saw a *poor* Negro's dog—would raise a pig yearly, which, in the family of the Negro would be a clear saving to the owner. Besides, we know that in our own neighborhood Negroes keep dogs with them in all their night prowling, in order to warn them in their robberies, as well as to protect them from the patrol. We know an instance that occurred a few days since, in which the dog protected a Negro from a patrol that pursued and overtook him, and enabled the Negro to make his escape.

[Upon the whole, it must come to this at last—we must make our election between the dog and the sheep. We must agree to the reduction of a large majority of our dog population, or we must content ourselves with the abandonment of sheep raising. Who will vote for the dog? and who for the sheep?

[#] "ABBEVILLE" will please excuse our "short comings" with his communications for our last number. His first article was handed to our printer for publication, and was referred to in some editorial remarks, but we found, when too late, that it had not been put in type, but in its stead a very short one that should have followed it. The article alluded to appears in our present number.

Subscribers to the Farmer and Planter.

All subscribers who did not order a discontinuance of their paper before the commencement of the present volume, and who received the first number, are considered subscribers for the full volume, (5,) and will be charged accordingly. In ordering papers to be changed, always state *from* what as well as *to* what office.

Frost and Crops.

'Tis said we had frost in our neighborhood on Friday, the 2d of June. We saw none, but thought it cold enough for frost; and the weather has been rather remarkable since; rains and cold north and east winds have been common since the 1st, up to this date (15th) of the month. *Wheat*, especially late crops, is much injured by rust. *Corn* and *Cotton* look tolerably well, where they have been well worked. *Oats*, especially the late crop, have much improved since the rains set in. Gardens are doing well.

Episcopal Female School.

We believe we have neglected to call the attention of our readers to the advertisement of this excellent school, at Glenn's Springs. See more on this subject in our next.

The Oregon Pea.

If the editor of the American Farmer will re-examine the report from the Patent Office respecting this pea, he will find that it was from the *product* of a tea-spoonful that *thirty* bushels were made. The writer says, "I obtained, from the State of Mississippi, *a year ago last spring*, about a tea-spoonful of seed, from the *product* of which I raised, *last season*, thirty bushels of peas," &c. The *Italics* are ours.

 COL. R. F. W. ALSTON's Address on "Sea Coast Crops." We have received a neat pamphlet containing this Address before the Agricultural Association of the Planting States, which has been mislaid. As soon as recovered, we intend commencing its publication.

To Correspondents.

The article, "Curious Facts on the Size of Heads," from our Honorable friend from High-tower, Ga., would, no doubt, be interesting to our scientific readers, but as it is not strictly legitimate to an agricultural paper, we must beg leave to decline its publication. If friend S. will give us some account of his farm operations we shall be pleased to publish it. We know he has a valuable farm down in the bend of the river, where, some thirty years since, whilst the Indians occupied the country, we lay in the humble cabin of old REUBEN DANIEL, once a resident of Greenville District, whose excellent wife we hope and believe is now in Heaven, for her kind and soothing attention to us during a five week's spell of the fever. And we have no doubt it is well conducted, as we have usually seen full cribs of corn, with fat horses, hogs, &c., when passing, which, until recently, has been as often as three or four times a year.

BEAR GRASS.—An old friend and subscriber in Greenville desires to know how to destroy this pest to sandy bottoms. Will any of our subscribers, who have had any experience in eradicating bear grass, give us the *modus operandi*?

 WE call the attention of stock-raisers to the advertisement of MR. CRESWELL. We have no doubt the stock will be found all that Mr. C. recommends them to be, and greatly cheaper than such can be purchased at the North. Mr. C. is expecting, in a few days, a fine buck of the New Oxford-fordshire breed, from MR. PETERS' late importation, which he designs crossing on his present stock of sheep.

TO INSURE HEALTH IN CHILDREN.—Give them plenty of milk, plenty of flannel and plenty of air, and let them have plenty of sleep, and they will seldom, if ever, ail anything. That is, milk is their best diet; they must be warmly clothed; must be much out of doors; and must always be allowed to sleep on till they awaken of their own accord.

THERE are more horses led into shambling gaits, and awkward overreaching and stumbling habits, by bad shoeing, than by all other causes combined.

Experiments in Suckering Corn.

Some theorists, not knowing what ridiculous thing to start next, having become pretty well exhausted of schemes, hit upon the suckers of corn, which they contend help along the crop very much, by the pollen from the said suckers falling on the tassels of the forming ears on the main stems. A writer in the *Cultivator*—Mr. George W. Coflin, of Armenia—observing these statements, tried an experiment, whether or not the suckers had anything to do with this procreative process, and the following is the result :

Space was left in the middle of an acre of potatoes, for 100 hills of corn—ten hills each way. This was planted from the middle of an ear, five grains to each hill, and of uniform depth. It came up evenly, and grew without molestation until about six or eight inches high, when small suckers began to spring up from about the base of the main stalks, which I proceeded to remove from alternate rows, not by “stripping,” as that might lacerate the main stalk and injure its growth, but by *cutting* close down. As often as they attempted to grow, through the season, I removed them in this way; and when the season of harvesting came, I had 50 hills of clean upright growth, and 50 of a bushy straggling appearance, having the suckers all on as they grew.

The former furnished large, well filled, and mostly sound ears, weighing $47\frac{1}{2}$ lbs. The latter more ears, but not as large or sound, weighing $47\frac{3}{4}$ lbs.

I regret that the stalks were not weighed, but very well remember concluding that the increase in *good* corn was more than balanced by the greater amount of stalks when left to grow natural, and the trouble of cutting the suckers.*

*No doubt of it. Suckers should *never* be left on corn, unless when it stands too thin on the ground, in which case the first one or two, putting out at the root, one should be left. Eos. F. & P.

Young Ladies.

An astute writer of the present day, very pointedly remarks :

Young ladies, don't let the key of the piano forte make you forget the keys of the store-room, or let the enlightenment of your understanding prevent you from inquiring the price of candles.

Some of our unsophisticated Misses will turn up their noses very contemptuously, and say, bah! begone with your unrefined lectures, they smell of the Dairy and the Tallow Chandler. Never mind my lassie, you dont expect to live and die an old maid—there's some fellow that will make your heart ache yet, and to no purpose, just because you have devoted most of your time to handling the keys of the piano, to the neglect of the more solid keys, upon which, after all, the most touching tunes are to be played, and upon which rest the honor and glory of a woman. Though there may be isolated instances where the doll baby young lady, after assuming the dignified title of Madam, “turns over a new leaf” and really becomes a good house-keeper, and a thoughtful diligent and accomplished head of a family, but in most cases a flippant, slothful, (only another name for delicately refined,) vain girl, makes a man a mighty poor help meet—certainly not such a one as our Maker intended man should have when he took that memorable rib from Adam's side. But in all sober earnest, young ladies, if you would be esteemed by your own sex, and loved by the men, (and are there any of you who wouldn't like to be loved by a nice young man?)—in fine, if you would culminate to that high honorable and noble position God intended you should occupy in the drama of life, study the useful arts—study a love for the dignified graces of matronly government—not to the total neglect of the lighter accomplishments—but bring the latter in due subjection to the former—adding, so to speak, the exquisit workmanship of the Corinthian Capitol, to the solid substantial beauties of the Doric order. We are not preaching a homily—we love the young ladies too well to see any of them turned out to graze in the barren field of old maidenhood, and we know a substantial, practical, sensible girl, is just as sure to run afoul of some clever fellow as two and two makes four. We don't charge the girls anything for telling them this.—*Milledgeville Union.*

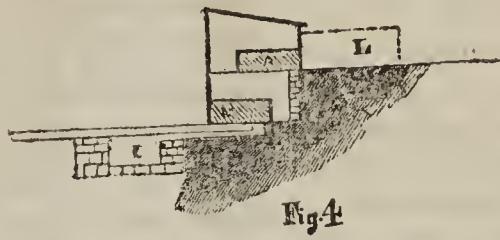


Fig. 4

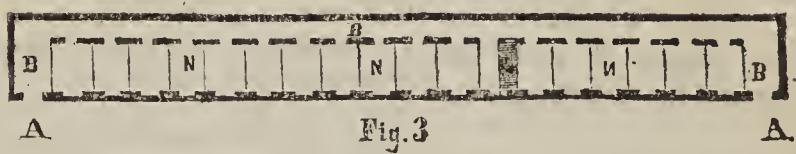


Fig. 3

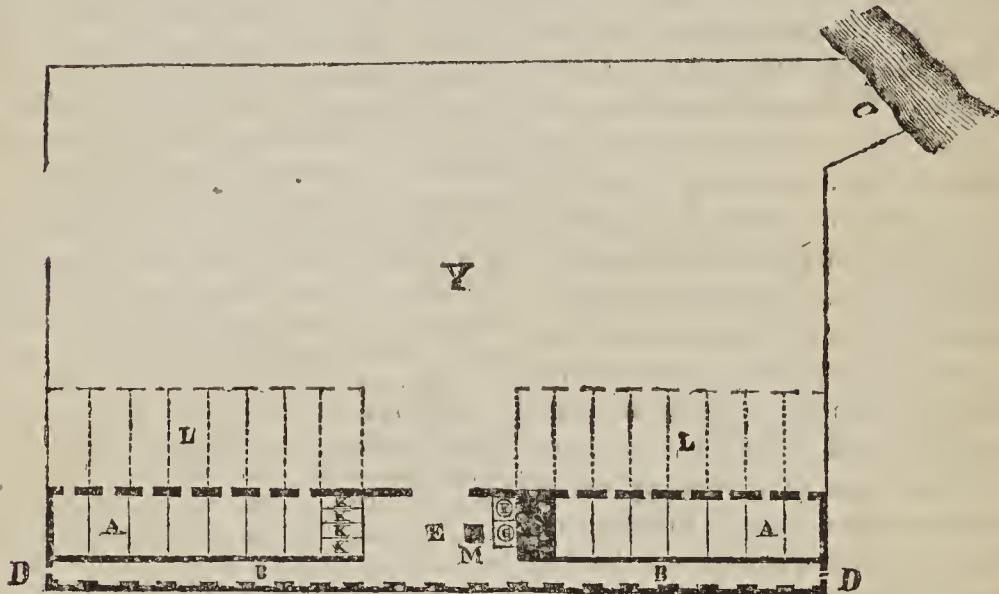


Fig. 2

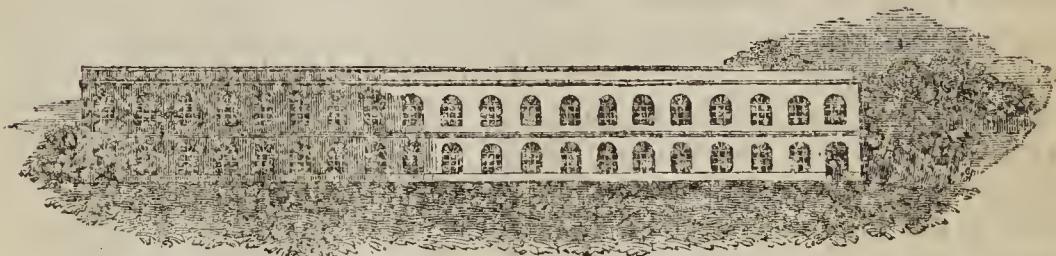


Fig. 1

MORTON'S PIGGERY, ETHERTON FARM, WEST NEEDHAM, MASS.

Description of Piggery.

Figure 1 represent a front perspective view of the whole building and pig yard.—The building is 125 feet long by 14 wide, with open or outer pens in the rear, in the second story, opening into a yard. It is of two stories, with glass windows* to each pen, fronting the south, and is constructed on the south side of a hill, the lower story being built on an excavation made for that purpose, whereby the pens in that story, (which are breeding pens for winter or early spring pigs,) are protected from the cold northerly winds, and a suitable temperature maintained in them for breeding in the winter when desired, without the use of artificial heat, by the rays of the sun shining through the glass of the windows. By this manner of construction, in ordinary winters, there will be found to be a sufficient heat maintained for breeding; but, if the winter should be unusually severe, artificial heat may be employed.

Figure 2 is a plan of the upper story of the building and yard behind. A are the inner pens, and L the outer yards, the latter are in the yard or inclosure Y. Lot Y has a large shed to protect the manure, and communicates with a stream of water, to another reservoir in the lower story, where the pigs enter the outer yards from the rear, and from thence to the inner pens, and, if desired, can be scoured there by sliding doors which are provided to each pen, though not represented in the drawings.—The passage B is four feet wide, and extends the whole length of the building. This intersects the entrance of the rear of the building, and serves as a convenient means of attending to the pigs, feeding, cleaning the pens, &c. E is the swill room, which is 16 feet long, in which is contained a furnace and boiler, a swill tub G, or reservoir into which the boiled provender is placed, a series of bins K, which are for holding different kinds of grain, and a place for firewood. Cut through the floor of the swill room is a hatchway M, which is for emptying the swill from the reservoir or boilers it will be convenient for feeding the breeding sows below. S denotes stairway communicating with the upper and lower story. D, D, end doors to enter passage B, B, B.

Figure 3 is a plat view of the lower story, or breeding pens. N are the pens which have no yard pens. And the passage R, R,

B, extends the whole length of the building, at the rear instead of at the front side, as in the upper story, so that the pigs get the full benefit of the rays of the sun through the windows. Those lower pens are entered at the doors A, A, from the front and through the passage B, B, at each end of the building, the pigs entering through either of these doors, pass into the long passage B, and enter the pens through doors at the rear. S represents the stairs below, aside of which is the reservoir to receive food from the trap door M.

Figure 4, a vertical cross section of the building. A are the upper pens, and L the outer yards. N, the lower or breeding pens. The floors of both stories slope so as to drain off the surplus liquid, and render the stalls or pens more easy to be cleansed.—These slope in opposite directions: the lower one to the front, and the upper one to the rear of the building, as represented in Figure 4. I is a reservoir located in front of the building, with suitable conducts leading from the building for draining the lower or breeding pens. The upper pens are drained from the rear side.

*The windows are protected with iron grates.

Experiment with Corn---try it.

The following is contributed by Mr. John Bennett to the Cultivator. It is just such an experiment as every one of our agricultural readers make without expense or trouble, and we trust they will not neglect to do so. If it shall be found successful by them, this article alone will more than pay an entire years subscription to the complier.—Mr. Bennett says:

At the request of a number of my neighbors and friends I transmit to you the result of an experiment made by myself the present season in raising corn.

At the time of gathering my crop of corn last fall I procured a number of stalks each having two ears upon it, which I reserved for seed last spring. On the 17th of May last I planted two rows of corn 20 rods long; the seed for which I took from the ears which grew nearest the root of the stalks preserved as above; I then planted two rows adjoining, the seed for which I took from the ears which grew highest upon the stalks preserved last fall.

Those four rows had equal care and attention during the season. The two planted

from the corn which grew nearest the root, grew more rapidly than the other. The four rows were cut up in September 19th. I husked out ten hills from each two rows October 8th, and for my own satisfaction weighed the corn in the ear. The weight of the ears taken from the ten hills planted from the corn growing nearest the roots was $17\frac{1}{2}$ pounds, while the weight of the ears which grew on the other ten hills was $9\frac{1}{2}$ pounds. I am fully satisfied, from the result of this experiment, that farmers should preserve, not the largest ears which grow on the stalk for seed; but those grown nearest the root.—*New Era*.

The Primary Laws of Breeding.

Condition and *Adaptation* are the primary and essential requisites to good breeding. These underlie all other qualifications, and are of themselves the best guarantee of success. The more they can be sustained by blood and a long strain of careful breeding so much the better. *Condition*, in the vital and self-possessed elements of its own being—*Adaptation*, in the proper pairing of male and female parents, in reference to their physiological fitness for each other in the production of offspring.

Condition.—Our correspondent from Highland co., (No 5, p. 69,) speaks briefly of this qualification in reference to stallions; it is equally true of both male and female parents, of all animals; of males mainly, at the season of copulation, but of females during the whole period of gestation. The mother may injure her prospective offspring either by the exhaustion, of overwork, the scantiness of feeding, or the torpor of repletion. In reference to the Horse, especially, the male is not in condition to transmit the desired vigorous constitution, unless his own system has been carefully developed by constant training. It is not enough that the groom takes out his stallion once a day, and lets him prance within the limit of a long reined bridle, but never allowed to start a perspiration upon his sleek and fatty sides. Every pound of flesh upon his body should be the growth of an active muscular development. Very true, that a horse thus kept would not exhibit such a morbid sexual propensity, as one more highly pampered, and might not, in consequence, bring his owner so many dollars for frequent service, yet the service when

rendered would be far more creditable to the animal, and satisfactory to the owner of the mare.

Many of our high kept blood stallions fail to justify the expectations of those who pay for their use, for which their owners have only themselves to blame. Their over anxiety to show off a horse as fat as a seal, with every hair just right, has betrayed them into neglect of what is essential to the future credit of their progeny. A good horseman does not need that the animal submitted to criticism should be dressed up within an inch of his life; no person is fit to judge of stock who cannot be trusted to examine it in its every day habit. We always suspect the quality of an animal that we are not permitted to see, until the keeper had put it in order.

We said above, that many high kept stallions fail to give reasonable satisfaction; we say also that many stallions of ordinary appearance, taken from the harness, give far better satisfaction than is anticipated, and simply because of *Condition*. And we say to the owners of high priced blood stock, that it will be far more creditable for them to reduce their horses to econdition and trust to posterity for the vindication of their claims to superiority, than to rail at those who continue to use what they sneeringly call *scrub stock*, and which, under many circumstances, is best adapted to their use.—We would no sooner select a vicious or pampered horse for breeding, than for the saddle or harness. Another and important advantage of using a well trained horse, is, that at the time of service the groom may have such perfect control of him as to allow of no disturbing influences upon either animal to leave an unfavorable impression upon the offspring, which is pretty sure to affect the temper or organization to a greater extent than many are aware of. And also while the general condition of both animals is a matter of the greatest moment, special care should be taken that at the time of copulation, the most desirable qualities should be in the state of highest exercise, free alike from the depressing influence of fear or the distraction of confusion and clamor.

Adaptation, in regard to the natural fitness of both parents, is the other essential requisite, and this is a law of universal application. Your narrow-chested, spindled-shank, slab-sided, short breathed animals, whether human or brute, ought never to be

allowed to entail the curse of their own mis-shapen organization upon posterity.— Aside from these, animals which are good in themselves, may be so ill paired as to produce inferior offspring. The proper balance of Capacity, should always be carefully preserved, and no anxiety to duplicate a favorite type should ever betray us into a violation of the equipoise of Nature's organic law. If you use a large, *logey* horse, with a narrow-chested, or even small and active mare, your colt will most likely be as leggy and ill-proportioned as a young lamb. On this subject the remarks of Mr. Tiffany, of Milwaukee, which we copied in last number. (p. 116,) are so much to our mind that we shall adopt them without amendment, and close these hints by saying, that theories in breeding, are of no account, which cannot show the record of truth in practice.

[*New Era.*]

Distemper in Cattle.

MR. EDITOR:—Whilst I have pen in hand, I will say to those of your readers who have the distemper amongst their cattle, to fill a trough nearly full of red clay, and sprinkle over liberally with salt, and put it in the lot where they run or are penned, so that they can have free access to it; and, according to my experience of some 12 or 15 years, it will be a preventive to the further ravages of this disease. I omitted it one year and lost several of my cattle, but having resumed my former plan, I have lost none since, although this fatal disease has been quite prevalent in my neighborhood. I sometimes mix a portion of ashes with the clay, say a third or fourth, and occasionally give a new sprinkling of salt, and it is surprising how fond the cattle will grow of this mixture, and how much they will consume.

My father was the first that I know of who adopted this plan, being induced to try the same from the fact of having heard that if you could get a cow that had the distemper, to eat red clay, they would get well. He, I suppose recollecting, that "nature often performed a cure beyond the powers

of art," accordingly salted his cattle some two or three times a week, on a red galled spot; and although his neighbors' cattle were dying rapidly around him, he had not a solitary case amongst his stock, nor did he ever lose one with this disease. My uncle had the distemper amongst his cattle in 1851, and one of his milk cows was found in a gully eating red clay, and she recovered. This is another effect of the powers of nature over that of art, and should lead us to be governed by the dictates of the former instead of the latter, which rarely leads us astray.

In conclusion I will say, that the cattle should have free access to the salt and clay from the first of April or May, until the commencement of the winter. Try it, Messrs. readers of the Planter, and I think you will find this prescription no humbug.

W. R. H.

Danville, May 30, 1854.

[*Southern Planter.*]

SODA WATER.—MR. EDITOR:—I send you a receipt for making soda water, by the use of which every man may have at command this delightful summer drink. It is made thus:—Take of tartaric acid a quarter of a pound, white sugar three pounds, boiling water four pints. Dissolve the acid and sugar in the water, and add, to flavor it, three table spoonfuls of essence of lemon. Put two table spoonfuls of this syrup in half a glass of cold water, and stir in half a tea-spoonful of powdered soda. It effervesces finely, and is as pleasant and more wholesome than the soda water of the shops.

I would recommend it to those who suffer from acidity of stomach after dining.

Yours,

ECONOMIST.

[*Southern Planter.*]

CURE FOR LICE.—Rub well with brimstone, and grease of any kind. Apply the mixture at such points as the lice are most inclined to congregate; feed sulphur if convenient. You may be sure if you doctor for mange, you will kill the lice.

CURE FOR WARTS.—Rub well with brm-stone, and grease of any kind. If not so large as to endanger too much bleeding, pull them off, and apply the above mixture.

I had a steer that I had been keeping out, which has a bunch of warts on his belly, as large as a two quart measure. I am now doctoring him, and if successful I will report. I thought at first I should lose him. Yours very truly,

C. C. PERKINS.

[Country Gentleman.]

Becket Mass.

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Superior Swine And Premium Poultry.

I AM prepared to engage PIGS by my large Byefield and Superior Suffolk Boars, from Matchless Sows of the following breeds:

SUFFOLK, Skinner, Essex, Chester Delaware, Byefield, Cheshire and Russian. The last four named are very large.

My stock of

DOMESTIC AND ORNAMENTAL POULTRY is unsurpassed, receiving the Premium at our State Fair for the finest collection, and upon several individual pairs. Each kind bred in separate yards, and consist of the following:

BRAMAH POOTRA, Imperial Chinese Colatta, Dorking, Spangled Hamburg Seabright and African BANTAMS Sumatra Pheasant Game, Ebon Game, Albin Game, Mexican Game

TURKEYS, Crested, Silesian Pure White do., Purple or Dove do.

BREMEN GEESE

Hong Kong do.

Wild do.

Crested White DUCKS

Black Java do.

Aylesbury do.

Italian Pea Fowl and White Guinea Fowl Madagascar or Lopped Eared RABBITS, ears 22 inches long, 5 broad,

All of which can be had at moderate prices, by addressing, post paid,

JOHN G. TURPIN,
Cloverdale, near Petersburg, Virginia.
July, 1854-6m

Notice to Stock-Raisers.

MY FULL-BRED MORGAN HORSE will make the Fall Season at Greenville C. H., S. C., commencing the last of July. Those of the mountain region who desire to breed from this popular stock of all work, would do well to avail themselves of this opportunity.

I have also for sale a fine

Ayreshire Bull, four years old, and several Bull Calves, fine form, compact and hardy, from stock noted for their superior milking qualities.

ALSO,
a few

New Oxfordshire Buck Lambs, not engaged, superior for their hardiness and heavy fleeces, weighing from seven to ten pounds per fleece. Price, ten dollars, each. I would sell a few BAKEWELL EWES, at four dollars, each, from 4 to 5 years old. JAMES CRESWELL.

Greenwood, Abbeville, S. C.

July, 1854

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Job Printing
DONE AT THIS OFFICE.